Amendments to the Claims:

This listing of claims will replace all prior versions:

Claims 1-18 (canceled)

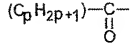
Claim 19 (previously presented): A molecule of general formula (I), and the pharmaceutically acceptable salts thereof:

$$(X_0)_{x0}\text{-}(X_1)_{x1}\text{-}(X_2)_{x2}\text{-}X_3\text{-}(X_4)_{x4}\text{-}X_5\text{-}X_6\text{-}(X_7)_{x7}\text{-}(X_8)_{x8}\text{-}(X_9)_{x9}$$

(I)

in which

- x_0, x_1, x_2, x_4, x_7, x_8 and x_9 each represent, independently, an integer equal to 0 or to 1;
- X_0 represents a group:



with p ranging from 3 to 23;

- X_1 and X_3 each represent a natural or synthetic amino acid in the L or D configuration, each comprising at least one hydroxyl function on its side chain;
- X_2 represents a natural or synthetic amino acid in the L or D configuration chosen from those comprising an alkyl side chain;
- X_4 represents a natural or synthetic amino acid in the L or D configuration chosen from those comprising an aromatic side chain;
- X_5 represents an amino acid in the L or D configuration chosen from lysine, arginine, histidine, aspartic acid, asparagine, glutamic acid and glutamine;
- X_6 represents an amino acid in the L or D configuration chosen from tyrosine, phenylalanine, leucine, isoleucine, alanine, *para*-benzoylphenylalanine and lysine;
- X_7 represents an amino acid in the L or D configuration chosen from glycine, alanine, leucine, valine, asparagine and arginine;

-X_8 represents an amino acid in the L or D configuration chosen from proline, valine, isoleucine and aspartic acid;

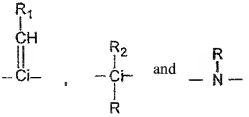
-X_9 represents an amino acid in the L or D configuration chosen from serine, alanine, lysine, arginine and tryptophan;

-the bond between two successive amino acids X_i-X_{i+1}, denoted $q_{i\ to\ i+1}$, i = 1 to 8 can be a peptide bond $-\overset{\overset{O}{\|}}{C}-NH-$ or a pseudopeptide bond chosen from: CO-O, CO-S, CO-CH_2, CO-N(Me), NH-CO, CH=CH, CH_2-CH_2, CH_2-S, CH_2-O, CS-NH, CH_2-NH, CO-CH_2-NH, CO-NH-NH, CO-NH-N= and CO-N(NH_2);

-the amino acids stated above X_i, i = 1 to 9 being capable of comprising a modification of their α-carbon, denoted C_i, i = 1 to 9 and bearing the side chain R of the amino acid, which modification consisting of the replacement of:

,

with a group chosen from:



,

the groups R and CH-R_1 representing the side chain of the amino acid and R_2 representing a C_1-C_6 alkyl group; R-R_2 can constitute a ring,

-the pseudopeptides of the invention also corresponding to the following conditions:

x_0 is equal to 1

or

one of the bonds $q_{i\ to\ i+1}$, i = 1 to 8 is a pseudopeptide bond

or

one of the C_i, i = 1 to 9 comprises one of the modifications stated above, wherein said molecule of formula (I) is capable of modulating the proteasome.

Claim 20 (previously presented): The molecule as claimed in claim 19, wherein one or more of the following conditions is verified:
at least one of the integers x_0, x_1, x_2, x_4, x_7, x_8 and x_9 is equal to 1;
X_1 and X_3, which may be identical or different, are chosen from threonine and serine;
X_2 is chosen from valine, leucine and isoleucine; or
X_4 is chosen from phenylalanine, tryptophan, tyrosine and *para*-benzoylphenylalanine.

Claim 21 (previously presented): The molecule as claimed in claim 20, comprising 4 to 8 amino acids.

Claim 22 (previously presented): A molecule as claimed in claims 19 to 21, wherein x_0 = 1.

Claim 23 (canceled)

Claim 24 (previously presented): The molecule as claimed in claim 19, wherein one or more of the following conditions are verified:
-at least one of X_1 and of X_3 represents threonine,
-X_2 is chosen from isoleucine and valine,
-X_4 is chosen from phenylalanine, tyrosine and *para*-benzoylphenylalanine, or
-at least 2 of the integers x_0, x_1, x_2, x_4, x_7, x_8 and x_9 are equal to 1.

Claim 25 (previously presented): The molecule as claimed in claim 19, wherein the molecule corresponds to formula (Ia):

$$X_0\text{-}X_1\text{-}X_2\text{-}X_3\text{-}X_4\text{-}X_5\text{-}X_6$$

(Ia)

in which the bonds $q_{i \text{ to } i+1}$ between the amino acids X_i and X_{i+1}, i = 1 to 5 are peptide or pseudopeptide bonds.

Claim 26 (canceled)

Claim 27 (canceled)

Claim 28 (currently amended): A molecule of general ~~The molecule as claimed in claim 19, wherein the molecule corresponds to~~ formula (Ib):

X_3-X_5-X_6-X_7-X_8-X_9

(Ib)

in which:

- X_3 represents a natural or synthetic amino acid in the L or D configuration, comprising at least one hydroxyl function on its side chain;
- X_5 represents an amino acid in the L or D configuration chosen from lysine, arginine, histidine, aspartic acid, asparagine, glutamic acid and glutamine;
- X_6 represents an amino acid in the L or D configuration chosen from tyrosine, phenylalanine, leucine, isoleucine, alanine, *para*-benzoylphenylalanine and lysine;
- X_7 represents an amino acid in the L or D configuration chosen from glycine, alanine, leucine, valine, asparagine and arginine;
- X_8 represents an amino acid in the L or D configuration chosen from proline, valine, isoleucine and aspartic acid;
- X_9 represents an amino acid in the L or D configuration chosen from serine, alanine, lysine, arginine and tryptophan;

-at least one of the bonds between two successive amino acids is a pseudopeptide bond,

or

-one of the α-carbons of one of the amino acids is a modified α-carbon.

Claim 29 (previously presented): The molecule as claimed in claim 19, wherein the molecule is:

CH_3-(C_nH_{2n})-CO-TVTYDY with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 1);

CH_3-(C_nH_{2n})-CO-TISYDY with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 2);

CH_3-(C_nH_{2n})-CO-TVSYKF with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 3);
CH_3-(C_nH_{2n})-CO-TITFDY with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 4);
CH_3-(C_nH_{2n})-CO-TITYKF with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 5);
CH_3-(C_nH_{2n})-CO-TITYEY with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 6);
CH_3-(C_nH_{2n})-CO-TITYDF with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 7);
CH_3-(C_nH_{2n})-CO-TVTYKL with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 8);
CH_3-(C_nH_{2n})-CO-TVTYKY with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 9);
CH_3-(C_nH_{2n})-CO-TVTFKF with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 10);
CH_3-(C_nH_{2n})-CO-TITYDL with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 11);
CH_3-(C_nH_{2n})-CO-TVTFDY with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 12);
CH_3-(C_nH_{2n})-CO-TVTFKF with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 13);
CH_3-(C_nH_{2n})-CO-TVTYKF with n=4, 6, 8, 10, 12, 14, 16, 18 (SEQ ID NO: 43);
TNL*GPS;
SEK*RVW;
TRA*LVR;
SNL*NDA; or
THI*VIK;
wherein * represents:
-a bond chosen from ester, thioester, keto methylene, keto methyleneamino, N-methylamide, inverse amide, Z/E vinylene, ethylene, methylenethio, methyleneoxy, thioamide, methyleneamino, hydrazino, carbonylhydrazone and N-amino bonds, or
-the presence of an aza-amino acid as a substitution for one of the amino acids adjacent to *.

Claim 30 (previously presented): The molecule as claimed in claim 19 coupled on its C-terminal end and/or on its N-terminal end with another molecule which promotes its bioavailability.

Claim 31 (previously presented): A composition comprising the molecule as claimed in claim 19 in a pharmaceutically acceptable carrier.

Claim 32 (previously presented): A method for treatment of a disorder or a pathology

associated with proteasome activity comprising administering to an animal in need thereof a molecule as claimed in claim 19.

Claim 33 (previously presented): The method as claimed in claim 32, wherein the disorder or pathology is selected from: cancers involving hematological tumors or solid tumors; autoimmune diseases; AIDS; inflammatory diseases; allograft rejection; and amyotrophy.

Claim 34 (previously presented): A method for radiosensitizing a tumor comprising contacting the tumor with a compound as claimed in claim 19.

Claim 35 (previously presented): A cosmetic and/or dermatological composition comprising a molecule as claimed in claim 19, in a cosmetically and/or dermatologically acceptable carrier.

Claim 36 (previously presented): A cosmetic process for preventing or treating the appearance of effects of chronological skin aging and/or of photoaging, comprising applying to skin the molecule as claimed in claim 19 in a cosmetically acceptable carrier.

Claim 37 (previously presented): The molecule as claimed in claim 21, wherein the molecule comprises 5 to 7 amino acids.

Claim 38 (previously presented): The molecule as claimed in claim 21, wherein the molecule comprises 6 amino acids.

Claim 39 (previously presented): The molecule as claimed in claim 24, wherein at least 3 of the integers x_0, x_1, x_2, x_4, x_7, x_8 and x_9 are equal to 1.

Claim 40 (previously presented): The molecule as claimed in claim 19, wherein p ranges from 2 to 6.

Claim 41 (previously presented): The molecule as claimed in claim 19, wherein p ranges

from 5 to 19.

Claim 42 (previously presented): The method as claimed in claim 32, wherein the animal is a human.

Claim 43 (previously presented): The method as claimed in claim 32, wherein the disorder is Alzheimer's disease and Parkinson's disease.

Claim 44 (previously presented): A method for modulating the proteasome of a cell comprising administering the molecule of claim 19 to a cell.

Claim 45 (previously presented): The molecule as claimed in claim 19, wherein X_1 and X_3 both represent threonine.